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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,924	07/08/2003	Robert Radulescu	P10-1301	9233

21839 7590 06/15/2006

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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/614,924

Applicant(s)

RADULESCU, ROBERT

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-24-06 has been entered.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 9, it is unclear if a tread per se or tire(s) having a tread is (are) being claimed. For example, the description of "tread on steer axles tires" in the preamble of claim 1 and the description of "the tire including means indicating the rolling direction" indicates that a tire is being claimed whereas the description of "The tread according to claim 1" in dependent claim 2 indicates that a tread per se is being claimed. In other words, it is unclear how "on steer axles tires" affects the scope of claims 1-9. A tread per se is not required to be "on" a tire. However, the description of "tread on steer axles tires" appears to require the tread to be on a steer axles tire.

In claim 9, "Se is the total of the surface areas of the at least one rib" should be --Se is the total of the surface area of the at least one rib--.

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4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 104 (EP 810104) in view of Sloman et al (US 2186180) and MacMillan (US 3,909,906).**

Europe 104 discloses a pneumatic radial tire for winter or all season use. The tire has a tread wherein the tread may include blocks wherein each block has sipes (incisions) of varying inclination. Europe 104 use the sipes of varying inclination to improve longitudinal adherence (grip) on a road surface. See col. 1 lines 3-6 of Europe 104. Europe 104 discusses the problem of wear of the edges of the incisions. See col. 2 line 24 and column 4 of Europe 104. Europe 104 teaches increasing the inclination of the sipes with respect to the radial direction toward the bottom of the incision for the benefit of reducing wear at the edges of the incisions and obtaining good braking and traction properties. The sipes may have a width of 0.2 to 1 mm. The sipes "... define a portion of a cylindrical surface over at least part of their radial and lateral area" (abstract, emphasis added). In figure 4, Europe 104 shows a block having five sipes wherein the inclination of the sipe with respect to the radial direction increases from the tread surface toward the bottom of the sipe. The sipes are arranged in the tread of the tire such that a radially innermost point of each sipe is located relative to the rolling direction of the tire, in front of the point of the sipe located on the running surface of the

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tread when new. See figures 4 and 5. Europe 104 teaches that the curve of the sipe may be extended by a rectilinear portion as shown in figures 14 and 15. As can be seen from figure 15, the sipe forms an angle of zero degrees with respect to the radial direction (line extending perpendicular to the point where the incision intersects the tread surface) for about 1/3 of the depth of the sipe and has a larger angle with respect to the radial direction thereafter. At col. 6 lines 6-13, Europe 104 teaches using the sipes in a rib. Europe 104 is silent as to the tread having at least three ribs.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide Europe 104's tread with at least three ribs wherein at least the intermediate rib comprises Europe 104's sipes since (1) Europe 104 teaches that the tire, which may be either a winter tire or an all season tire, may have the sipes in a rib and (2) Sloman et al suggests using slits (sipes) in ribs of a tire for use on wet and snow covered surfaces. With respect to width less than 3 mm, Europe 104 teaches a width of 0.2 to 1 mm. With respect to the angular relationship being zero degrees for 1/3 of the incision depth E, Europe 104 teaches forming the sipes with an angular relationship of zero degrees for about 1/3 of the sipe depth. See figure 15.

Furthermore, it would have been obvious to one of ordinary skill in the art to provide Europe 104's tire with means indicating the rolling direction since (1) Europe 104 teaches orienting the sipes with respect to a specified rolling direction and (2) MacMillan suggests providing arrows on tires to indicate rotation of the tire.

With respect to crown reinforcement, it would have been obvious to one of ordinary skill in the art to provide Europe 104's pneumatic radial tire with a crown

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reinforcement since it is taken as well known / conventional per se in the tire art to provide a pneumatic radial tire with a crown reinforcement (belt). The description of "for a heavy vehicle" relates to intended use.

As to claims 2, 3 and 5, it would have been obvious to provide Europe 104's sipe such that the average inclination of the sipe is 5-15 degrees (claim 2) / the inclination of a portion of the sipe at a depth greater than $\frac{1}{3}$ E is between 5-25 degrees (claims 3 and 5) since Europe 104 teaches curving the sipe in the depth direction along an arc having a radius of $\frac{1}{2}$ to 10 times (or $\frac{1}{2}$ to 3 times) the total radial depth of the sipe.

As to claims 4, 6 and 9 (formula), it would have been obvious to one of ordinary skill in the art to provide Europe 104's tread with ribs and incisions such that the claimed relationship is satisfied in view of Sloman et al's teaching to (a) space slits (sipes) at 0.3 inch to 1.25 inches (7.6 mm to 31.8 mm), (b) use a slit (sipe) depth such as $\frac{1}{3}$ to $\frac{1}{2}$ groove depth and (c) use uncut ribs to reduce noise (figure 13, four non-siped ribs and three sipes ribs); it being noted that since units such as mm, inch, mm², etc. are not specified for the pitch, depth and areas, the claimed relationship is sufficiently broad to read on slits (sipes) arranged according to the teachings of Sloman et al.

As to claim 7, Europe 104 teaches sipes, which are curved in the tread thickness direction.

As to claim 8, Europe 104 teaches that the sipe (incision) may comprise a rectilinear part at each end (col. 6 lines 25-27).

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Remarks

6) Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

7) No claim is allowed.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
June 11, 2006


STEVEN D. MAKI
PRIMARY EXAMINER 6-11-06